

Superior Protection by Flublok® Influenza Vaccine in Seniors Documented in New England Journal of Medicine

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Meriden, CT — [Protein Sciences Corporation](#) announced the publication of clinical trial results comparing Flublok® Quadrivalent – the quadrivalent version of [Flublok® influenza vaccine](#) – to a traditional egg-based quadrivalent inactivated vaccine. The data published in the [June 22nd issue](#) of the New England Journal of Medicine showed that Flublok Quadrivalent provided significantly improved protection against laboratory confirmed influenza illness in older adults.

The publication notes that approximately 9,000 people aged 50 and older were enrolled and randomized in an efficacy study designed to compare Flublok Quadrivalent to a traditional quadrivalent vaccine. People who were given Flublok Quadrivalent were over 40% less likely to develop culture-confirmed influenza. This data satisfies both pre-specified criteria for non-inferiority and superiority of Flublok over the traditional egg-based quadrivalent inactivated vaccine. Flublok Quadrivalent was approved by the FDA in October 2016 and will be available nationwide in prefilled syringes for the upcoming flu season.

“This study shows that Flublok® Quadrivalent, produced with modern recombinant technology can provide better protection against confirmed influenza-like illness among older adults than standard-dose quadrivalent influenza vaccine produced with traditional technology.” said Lisa Dunkle MD, Chief Medical Officer of Protein Sciences. “We demonstrated statistically significantly better protection by Flublok based on considerably fewer people contracting the flu after vaccination with Flublok Quadrivalent. Today, we announce that these peer-reviewed results have been published in the highly respected New England Journal of Medicine. Furthermore, physicians are eligible for up to 1 hour AMA PRA category 1 CME credit for reading the article. Clearly, Flublok represents a major step forward in combating influenza on a global scale.”

Flublok is the only flu vaccine made without the use of eggs and therefore is not subject to the mutations that are sometimes introduced into the vaccine during the process of egg adaptation that can cause the traditional vaccines to be ineffective (see [Skowronski et al. \(2014\) PLOS ONE 9\(3\), e92153](#)). Flublok contains three times more active ingredients than traditional vaccines and produced significantly higher immune responses to the A strains of influenza (especially H3N2) in the Flublok Quadrivalent study. Furthermore, Flublok Quadrivalent is the first and only high antigen-content quadrivalent flu vaccine that with its high efficacy makes it ideal for older

adults and those with a compromised immune system. Flublok is highly purified and does not contain influenza virus, antibiotics, formaldehyde, preservatives, egg protein, latex, gluten or gelatin unlike other flu vaccines. Flublok Quadrivalent is FDA approved for adults 18 and older. For more information about Flublok, please visit www.flublok.com.

About Protein Sciences

Protein Sciences is a world leader in vaccine development and protein production. Our mission is our inspiration: to save lives and improve health through the creation of innovative vaccines and biopharmaceuticals.

About Flublok®

Flublok, the world's first recombinant protein-based vaccine for the prevention of seasonal influenza disease, is approved for all adults over 18 years. FDA approved the quadrivalent formulation ("Flublok Quadrivalent") in October 2016 that will be commercially available for everyone over 18 years for the 2017/18 influenza season. Flublok is the only flu vaccine made in a 100% egg-free system using modern cell culture technology, making it unnecessary to use an infectious influenza virus, antibiotics or harsh chemicals (e.g., formaldehyde) in manufacturing. Flublok is highly purified and does not contain any preservatives (e.g., thimerosal - a form of mercury), egg proteins, gelatin or latex. In addition, Flublok contains three times more antigen than traditional flu vaccines (3x45mcg hemagglutinin protein versus 3x15mcg hemagglutinin protein). In a 2014/15 post-marketing study of 9,000 adults 50 years and older, people who received Flublok were over 40% less likely to develop cell culture confirmed influenza than people who received a traditional flu vaccine. Flublok is an exact copy of the influenza virus coat protein and is not subject to the egg-adapted mutations associated with low vaccine effectiveness (see [Skowronski et al. \(2014\) PLOS ONE 9\(3\), e92153](#)).

Healthcare professionals in the U.S. wishing to order Flublok should contact one of the following distributors:

- Protein Sciences Corporation: 203-686-0800 www.flublok.com
- FFF Enterprises: 800-843-7477 www.myfluvaccine.com
- Cardinal Health: 866-677-4844 <http://www.cardinal.com/flu>
- McKesson: 877-MCK-4FLU mms.mckesson.com
- Moore Medical: 800-234-1464 www.mooremedical.com/flu
- Henry Schein: 1-800-772-4346 www.henryschein.com

Learn more at www.proteinsciences.com and www.flublok.com.

Flublok Safety Information

Flublok is approved for people 18 and older to prevent influenza disease. The most common side effect from Flublok is pain at the site of injection. Headache, fatigue or muscle ache may occur. Tell the doctor if you have ever experienced Guillain-Barré syndrome (severe muscle weakness) or have had a severe allergic reaction to any component of Flublok vaccine. Vaccination with Flublok may not protect all individuals. Please see the complete Package Insert available at www.flublok.com or call 203-686-0800 for more information.

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